FIG. 1
(PRIOR ART)

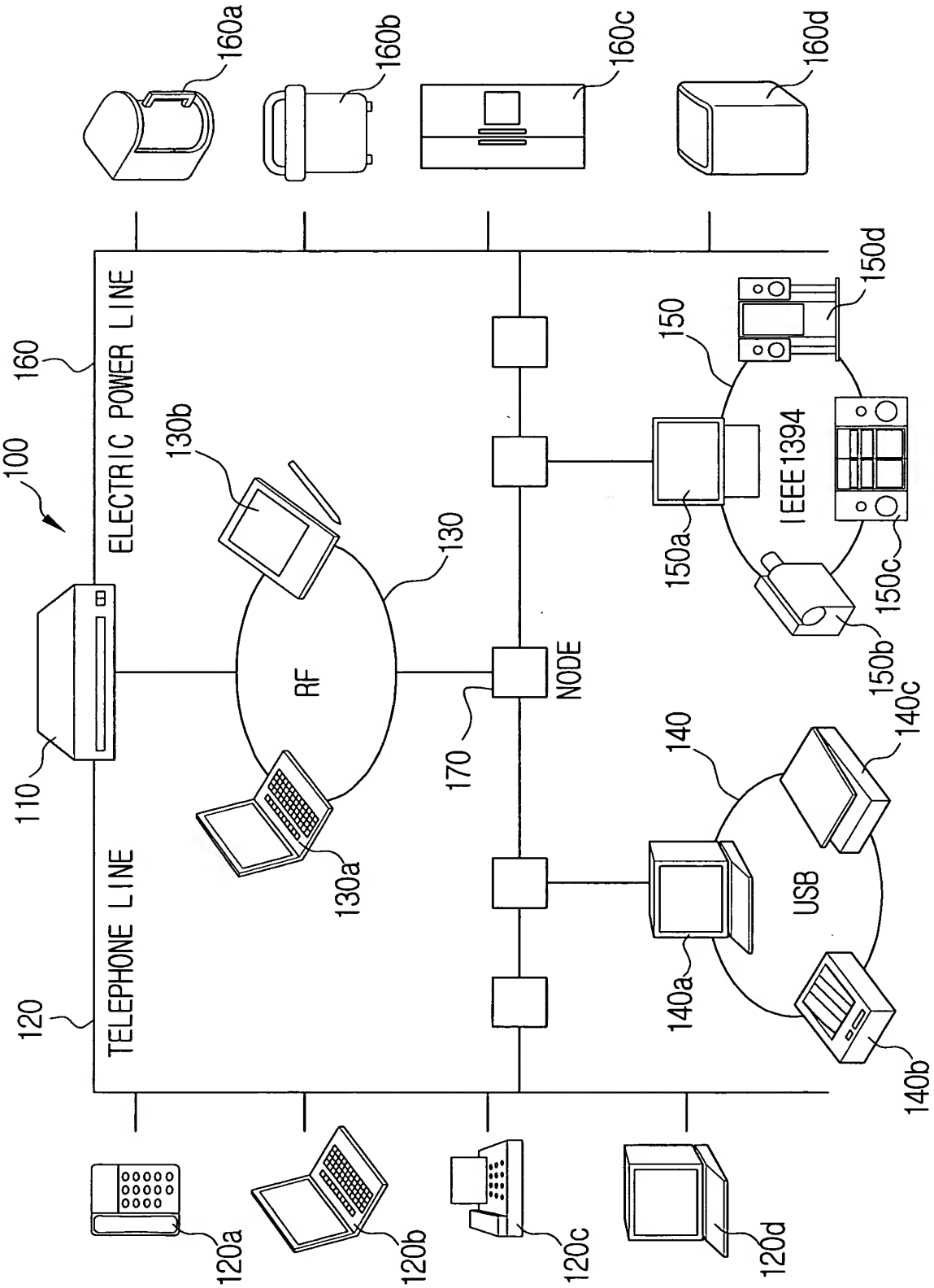


FIG. 2

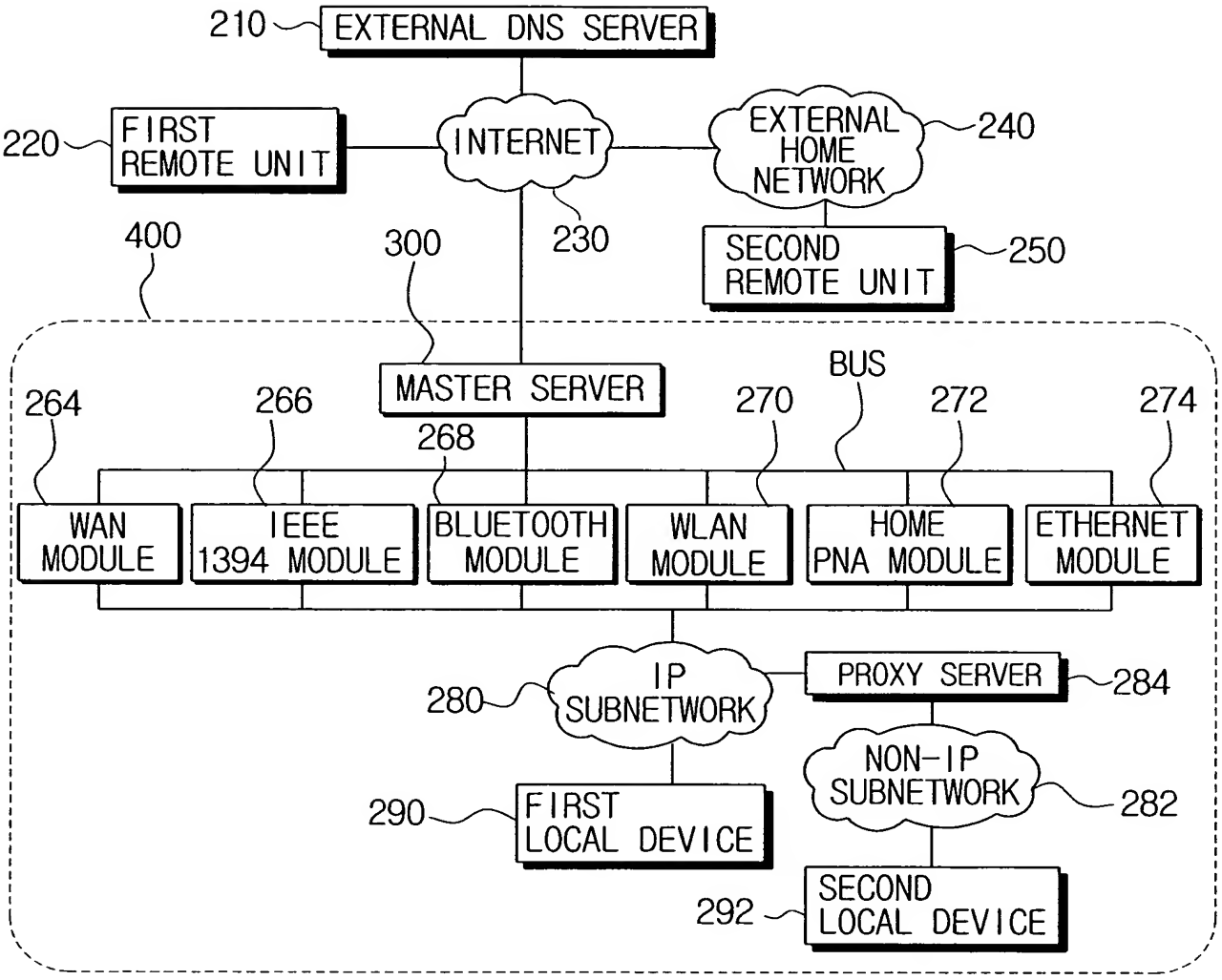

210
EXTERNAL DNS SERVER
220
FIRST REMOTE UNIT
INTERNET
EXTERNAL HOME NETWORK
240
400
300
230
SECOND REMOTE UNIT
250
MASTER SERVER
BUS
264
266
268
270
272
274
WAN MODULE
IEEE 1394 MODULE
BLUETOOTH MODULE
WLAN MODULE
HOME PNA MODULE
ETHERNET MODULE
IP SUBNETWORK
280
PROXY SERVER
284
NON-IP SUBNETWORK
282
290
FIRST LOCAL DEVICE
292
SECOND LOCAL DEVICE

FIG. 3

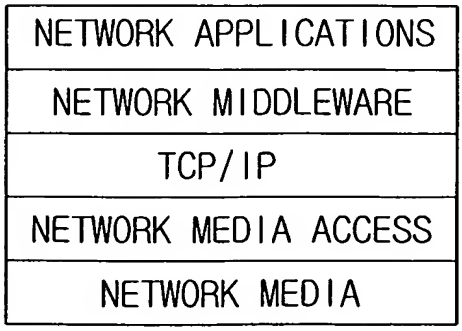

NETWORK APPLICATIONS
NETWORK MIDDLEWARE
TCP/IP
NETWORK MEDIA ACCESS
NETWORK MEDIA

FIG. 4

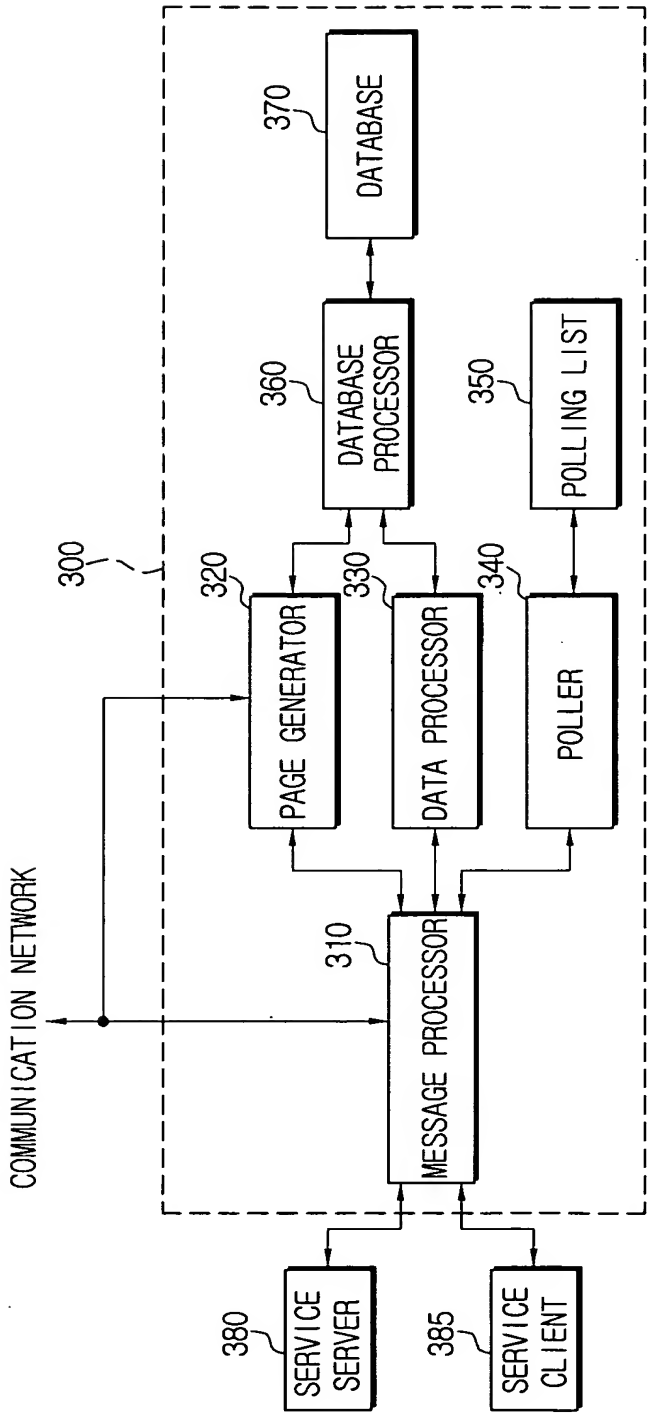

COMMUNICATION NETWORK
300
310
MESSAGE PROCESSOR
320
PAGE GENERATOR
330
DATA PROCESSOR
340
POLLER
350
POLLING LIST
360
DATABASE PROCESSOR
370
DATABASE
380
SERVICE SERVER
385
SERVICE CLIENT

FIG. 5

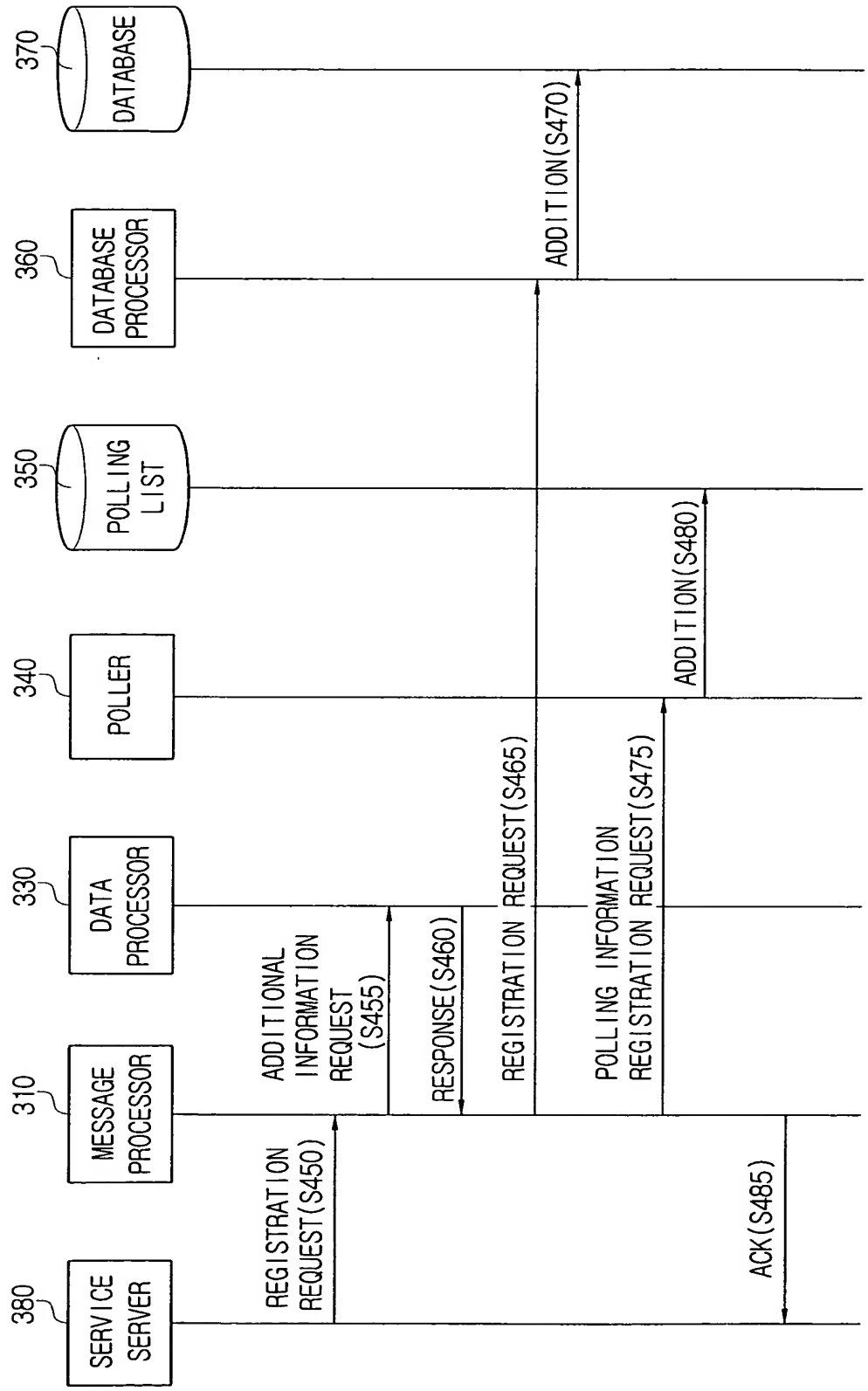

380
SERVICE SERVER
310
MESSAGE PROCESSOR
330
DATA PROCESSOR
340
POLLER
350
POLLING LIST
360
DATABASE PROCESSOR
370
DATABASE
REGISTRATION REQUEST(S450)
ADDITIONAL INFORMATION REQUEST (S455)
RESPONSE(S460)
REGISTRATION REQUEST(S465)
ADDITION(S470)
POLLING INFORMATION REGISTRATION REQUEST(S475)
ADDITION(S480)
ACK(S485)

FIG. 6

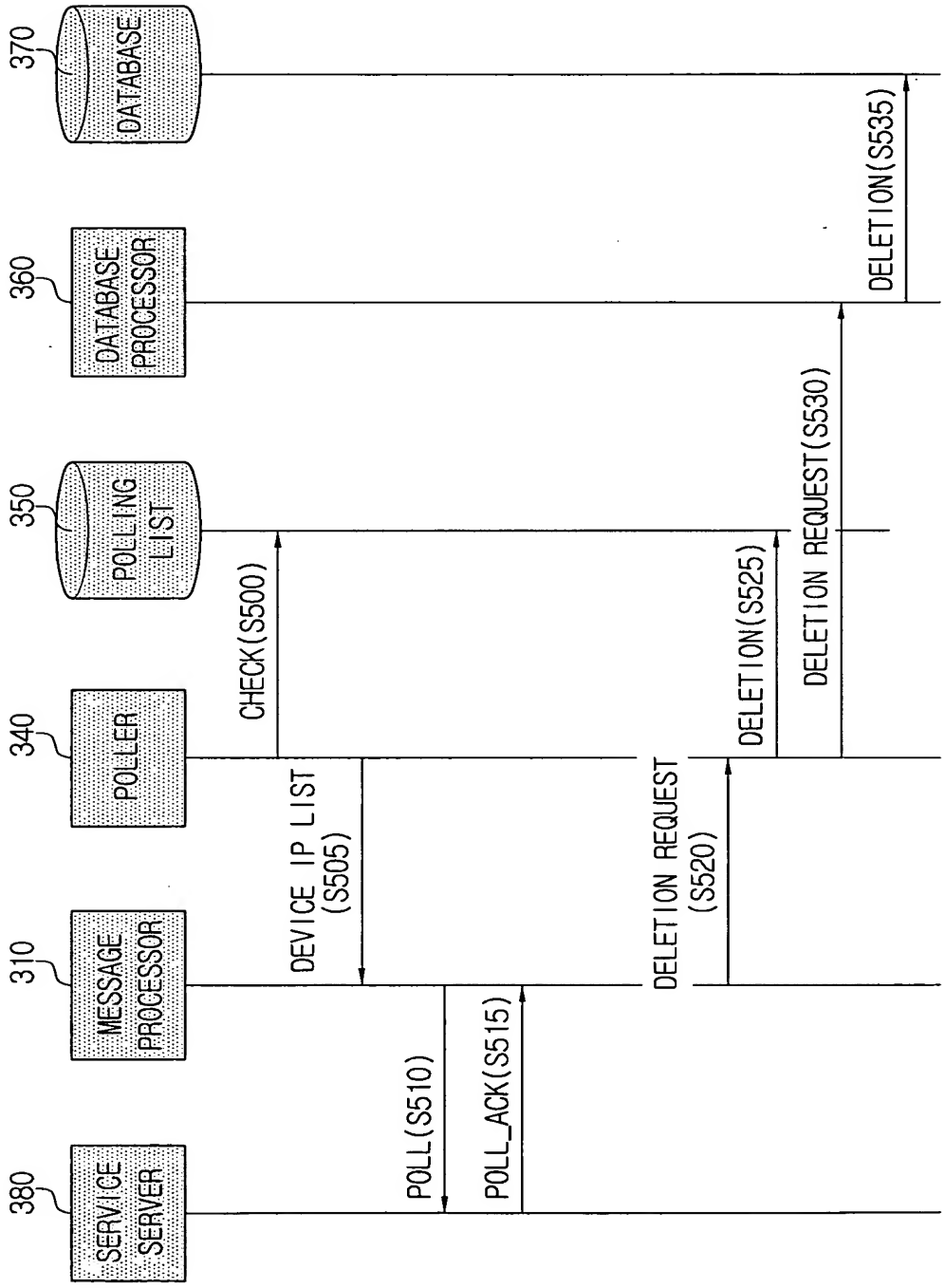

370
DATABASE
360
DATABASE PROCESSOR
350
POLLING LIST
340
POLLER
310
MESSAGE PROCESSOR
380
SERVICE SERVER
CHECK(S500)
DEVICE IP LIST (S505)
POLL(S510)
POLL_ACK(S515)
DELETION REQUEST (S520)
DELETION(S525)
DELETION REQUEST(S530)
DELETION(S535)

FIG. 7

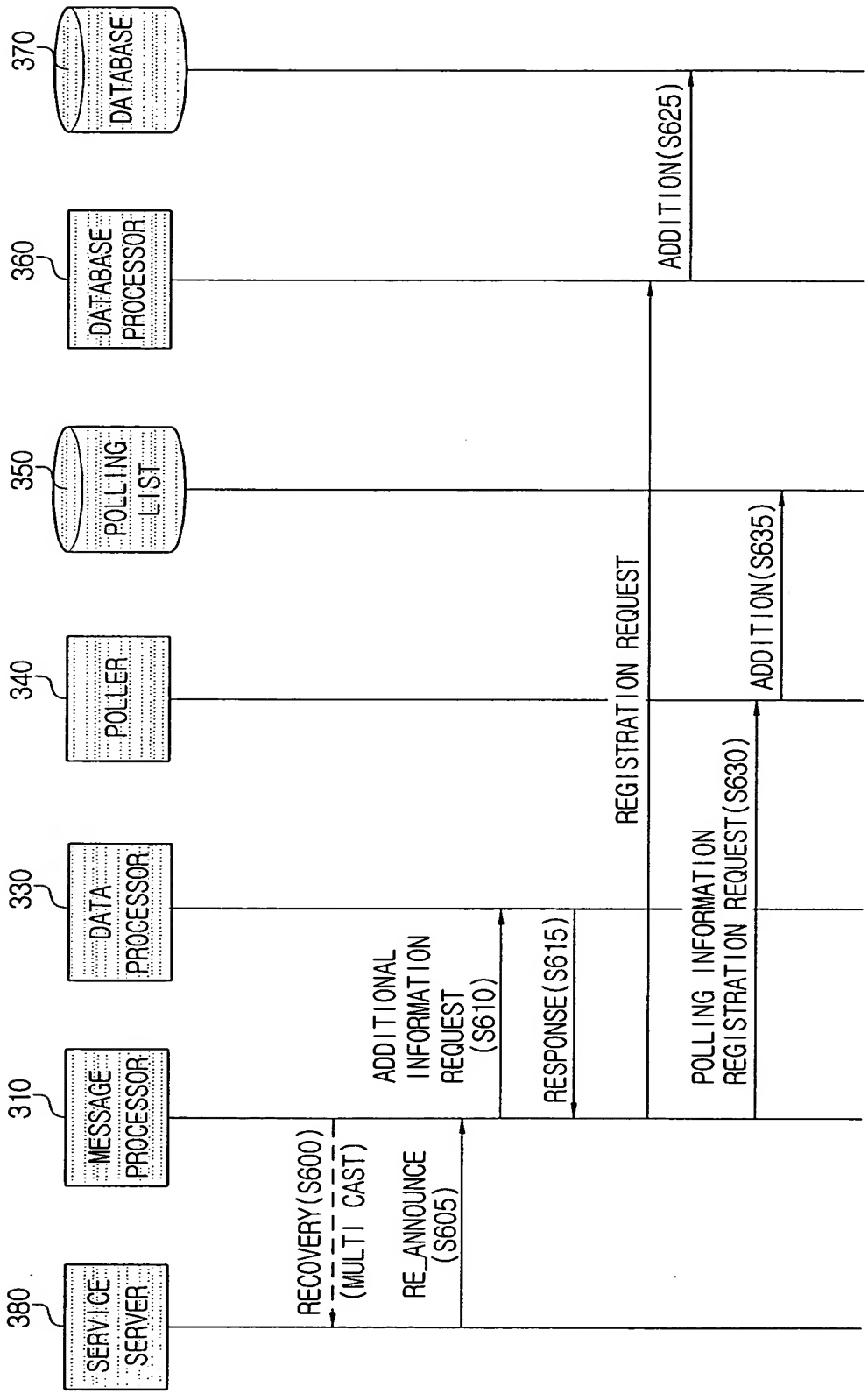

380
SERVICE SERVER
310
MESSAGE PROCESSOR
330
DATA PROCESSOR
340
POLLER
350
POLLING LIST
360
DATABASE PROCESSOR
370
DATABASE
RECOVERY(S600)
(MULTI CAST)
RE_ANNOUNCE (S605)
ADDITIONAL INFORMATION REQUEST (S610)
RESPONSE(S615)
REGISTRATION REQUEST
POLLING INFORMATION REGISTRATION REQUEST(S630)
ADDITION(S635)
ADDITION(S625)

FIG. 8

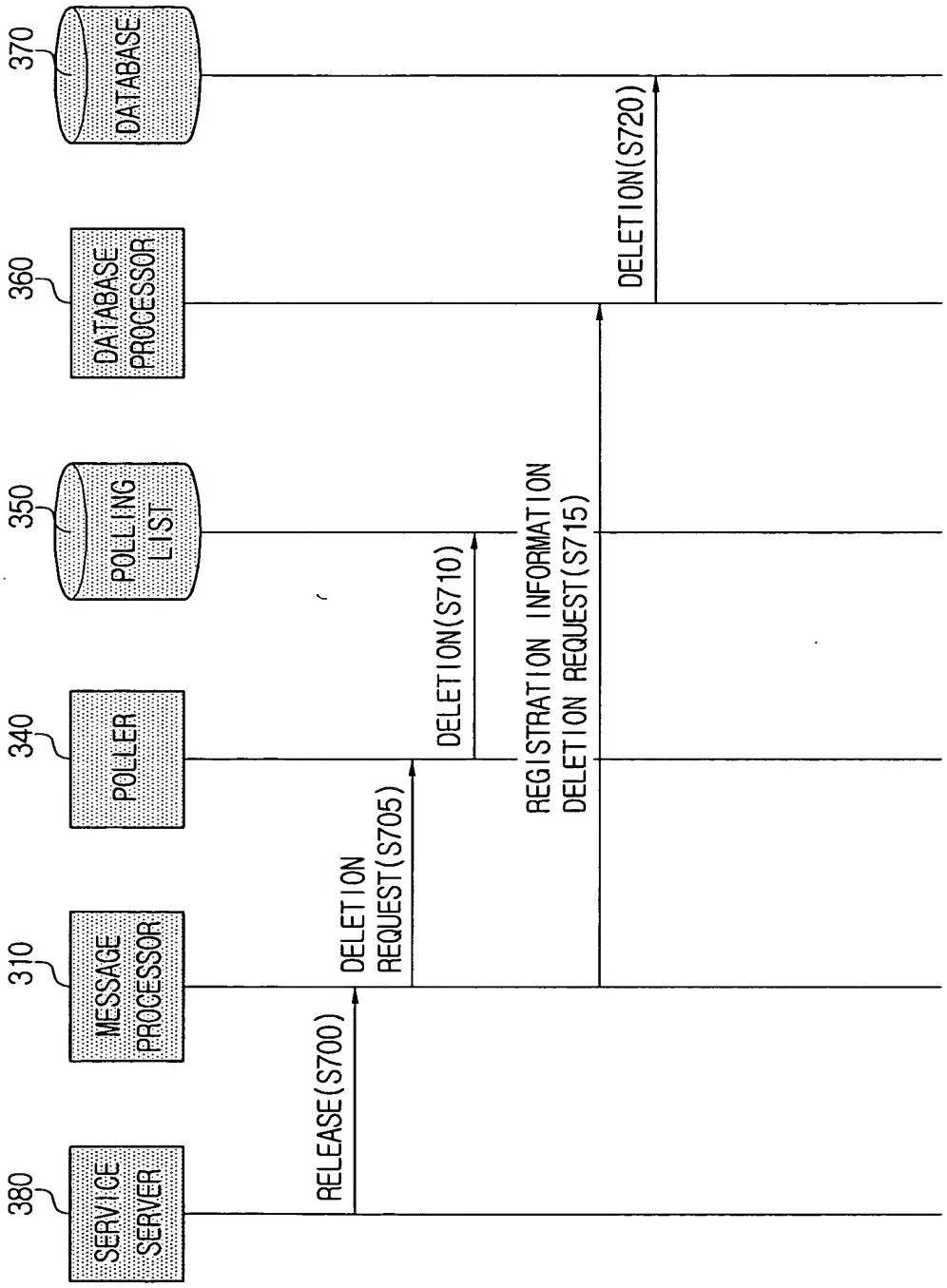
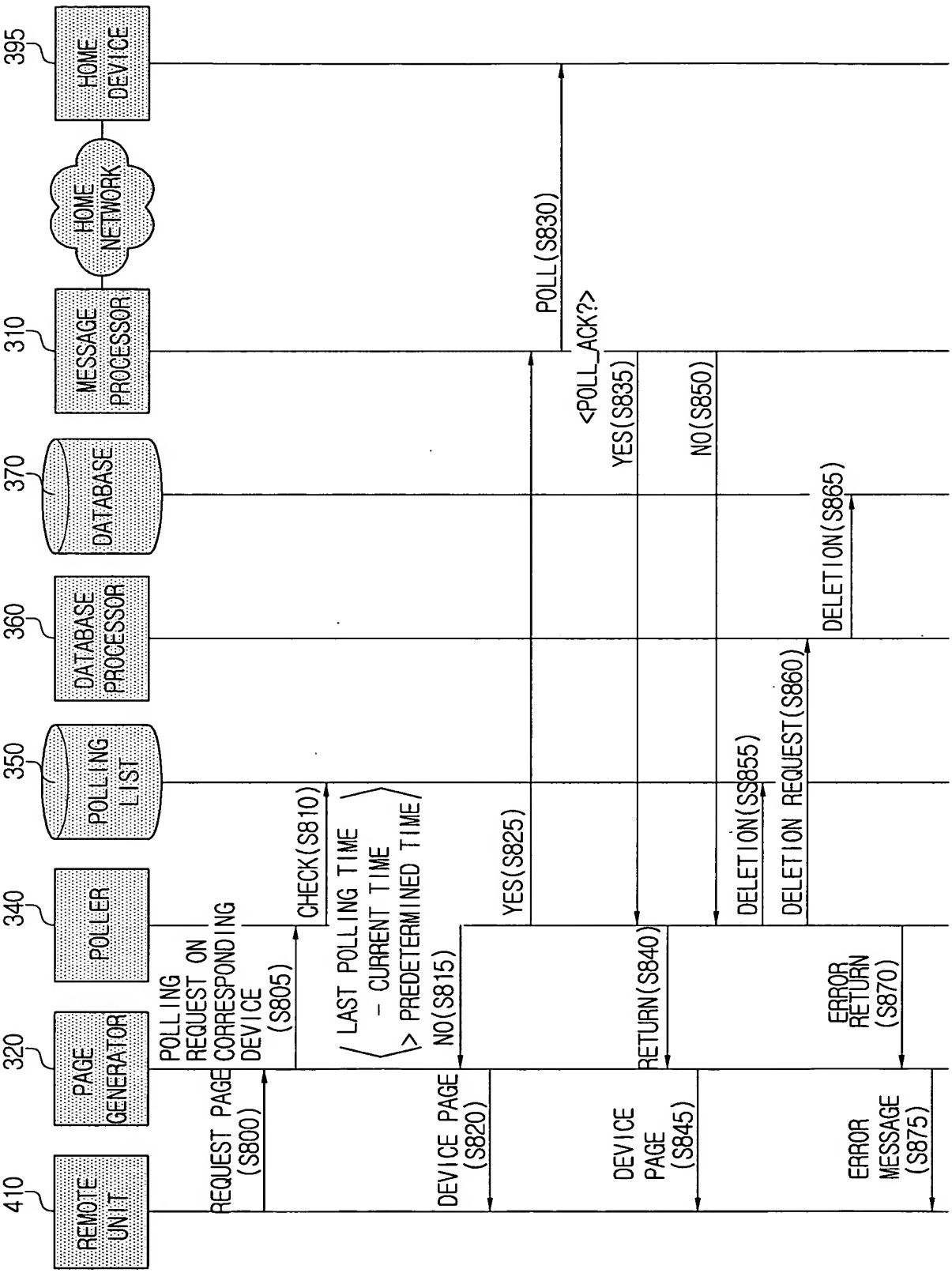

380
SERVICE SERVER
310
MESSAGE PROCESSOR
340
POLLER
350
POLLING LIST
360
DATABASE PROCESSOR
370
DATABASE
RELEASE(S700)
DELETION REQUEST(S705)
DELETION(S710)
REGISTRATION INFORMATION DELETION REQUEST(S715)
DELETION(S720)

FIG. 9


410
REMOTE UNIT
320
PAGE GENERATOR
340
POLLER
350
POLLING LIST
360
DATABASE PROCESSOR
370
DATABASE
310
MESSAGE PROCESSOR
HOME NETWORK
395
HOME DEVICE
REQUEST PAGE (S800)
POLLING REQUEST ON CORRESPONDING DEVICE (S805)
CHECK(S810)
/ LAST POLLING TIME - CURRENT TIME > PREDETERMINED TIME
NO(S815)
DEVICE PAGE (S820)
YES(S825)
POLL(S830)
<POLL_ACK?>
YES(S835)
RETURN(S840)
DEVICE PAGE (S845)
NO(S850)
DELETION(SS855)
DELETION REQUEST(S860)
DELETION(S865)
ERROR RETURN (S870)
ERROR MESSAGE (S875)